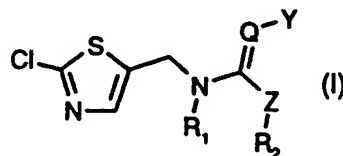


What is claimed is:

1. A process for the preparation of a compound of the formula



and, where applicable, its *E/Z*-isomers, mixtures of *E/Z*-isomers and/or tautomers, in each case in free form or in salt form, wherein

Q is CH or N,

Y is NO<sub>2</sub> or CN,

Z is CHR<sub>3</sub>, O, NR<sub>3</sub> or S,

R<sub>1</sub> and R<sub>2</sub> are either each independently of the other hydrogen or unsubstituted or R<sub>4</sub>-substituted C<sub>1</sub>-C<sub>8</sub>alkyl, or together form an alkylene bridge having two or three carbon atoms, and said alkylene bridge may additionally contain a hetero atom selected from the group consisting of NR<sub>5</sub>, O and S,

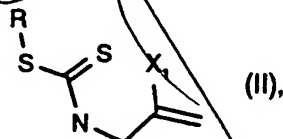
R<sub>3</sub> is H or unsubstituted or R<sub>4</sub>-substituted C<sub>1</sub>-C<sub>12</sub>alkyl,

R<sub>4</sub> is unsubstituted or substituted aryl or heteroaryl, and

R<sub>5</sub> is H or C<sub>1</sub>-C<sub>12</sub>alkyl;

which comprises

a) reacting a compound of the formula



and, where applicable, its *E/Z*-isomers, mixtures of *E/Z*-isomers and/or tautomers, in each case in free form or in salt form, wherein

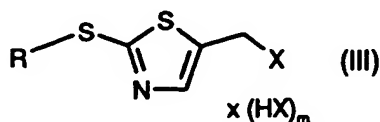
R is unsubstituted or substituted C<sub>1</sub>-C<sub>12</sub>alkyl, unsubstituted or substituted C<sub>2</sub>-C<sub>4</sub>alkenyl, unsubstituted or substituted C<sub>2</sub>-C<sub>4</sub>alkynyl, unsubstituted or substituted C<sub>3</sub>-C<sub>6</sub>cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or -SR<sub>6</sub>; and

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$R_6$  is unsubstituted or substituted  $C_1$ - $C_{12}$ alkyl, unsubstituted or substituted  $C_2$ - $C_4$ alkenyl, unsubstituted or substituted  $C_2$ - $C_4$ alkynyl, unsubstituted or substituted  $C_3$ - $C_6$ cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl,

$X_1$  is a leaving group;

with a halogenating agent, in the presence of a base, to form a compound of the formula



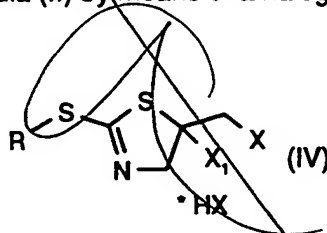
or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein

R is as defined for formula (II);

m is 0 or 1; and

X is halogen; or

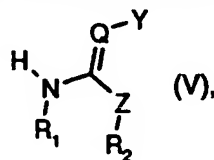
b) converting a compound of formula (II) by means of a halogenating agent into a compound of the formula



or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, wherein R, X and  $X_1$  are as defined for formulae (II) and (III); optionally

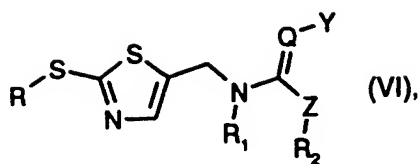
c) converting a compound of formula (IV), in the absence or in the presence of a base, preferably in the presence of a base, into a compound of formula (III);

d) converting a compound of formula (III) by reacting with a compound of the formula



or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, in each case in free form or in salt form, wherein  $R_1$ ,  $R_2$ , Y, Z and Q are as defined for the compound of formula (I), into a compound of the formula

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or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof, in each case in free form or in salt form, and wherein R<sub>1</sub>, R<sub>2</sub>, Y, Z and Q are as defined above for the compound of formula (I) and R is as defined above for the compound of formula (II); or

e) converting a compound of formula (IV) by reaction with a compound of formula (V) into a compound of formula (VI); and

f) converting a compound of formula (VI) by means of a chlorinating agent into a compound of formula (I);

and in each case, if desired, converting a compound of formula (I) obtainable in accordance with the process or by another method, or an E/Z-isomer or tautomer thereof, in each case in free form or in salt form, into a different compound of formula (I) or an E/Z-isomer or tautomer thereof, in each case in free form or in salt form, separating a mixture of E/Z-isomers obtainable in accordance with the process and isolating the desired isomer, and/or converting a free compound of formula (I) obtainable in accordance with the process or by another method, or an E/Z-isomer or tautomer thereof, into a salt or converting a salt, obtainable in accordance with the process or by another method, of a compound of formula (I) or of an E/Z-isomer or tautomer thereof into the free compound of formula (I) or an E/Z-isomer or tautomer thereof or into a different salt.

2. A process according to claim 1, wherein in the compound of formula (I)

R<sub>1</sub> and R<sub>2</sub> in the compounds of formulae (I), (V) and (VI) are either each independently of the other hydrogen or C<sub>1</sub>-C<sub>4</sub>alkyl, or together form a alkylene bridge containing 2 or 3 carbon atoms, that may additionally contain a hetero atom selected from the group consisting of O and S, or may contain the group NR<sub>5</sub>, and  
R<sub>5</sub> is H or C<sub>1</sub>-C<sub>4</sub>alkyl.

3. A process according to claim 1, wherein

R in the compounds of the formulae (II), (III), (IV) and (VI) is unsubstituted or substituted C<sub>1</sub>-C<sub>12</sub>alkyl; unsubstituted or substituted aryl-C<sub>1</sub>-C<sub>4</sub>alkyl; unsubstituted or halo-substituted heterocycyl-C<sub>1</sub>-C<sub>4</sub>alkyl, aryl-C<sub>2</sub>-C<sub>4</sub>alkenyl or heterocycyl-C<sub>2</sub>-C<sub>4</sub>alkenyl; unsubstituted or halo-

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substituted  $C_2-C_4$ alkenyl,  $C_2-C_4$ alkynyl, aryl- $C_2-C_4$ alkynyl, heterocycyl- $C_2-C_4$ alkynyl or  $C_4-C_6$ cycloalkyl; unsubstituted or halo-,  $C_1-C_4$ alkyl-, HO- $C_1-C_4$ alkyl- or HS- $C_1-C_4$ alkyl-substituted aryl; unsubstituted or halo- or  $C_1-C_4$ alkyl-substituted heterocycyl;  $-CH_2COO-C_1-C_8$ alkyl,  $-CH_2CO-C_1-C_8$ alkyl,  $SR_6$ ,  $-(CH_2)_n-SR_6$  or  $-CH_2COO-M$ , wherein M is hydrogen or a cation; and n is from 1 to 8.

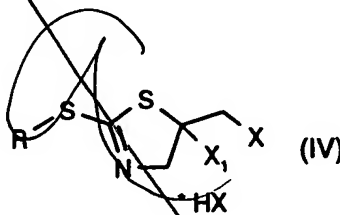
4. A process according to claim 1, wherein

R in the compounds of formulae (II), (III), (IV) and (VI) is  $SR_6$  or  $-(CH_2)_n-SR_6$  and

$R_6$  is  $C_1-C_8$ alkyl, aryl- $C_1-C_4$ alkyl, arylthio- $C_1-C_4$ alkyl, heterocycyl- $C_1-C_4$ alkyl, heterocycylthio- $C_1-C_4$ alkyl,  $C_2-C_4$ alkenyl, aryl- $C_2-C_4$ alkenyl, heterocycyl- $C_2-C_4$ alkenyl,  $C_2-C_4$ alkynyl, aryl- $C_2-C_4$ alkynyl, heterocycyl- $C_2-C_4$ alkynyl, cyclohexyl, aryl or heterocycyl; and n is 1 or 2.

5. A process according to claim 1, wherein in the compounds of formulae (III) and (IV) X is chlorine or bromine.

6. A compound of the formula



wherein

R is unsubstituted or substituted  $C_1-C_{12}$ alkyl, unsubstituted or substituted  $C_2-C_4$ alkenyl, unsubstituted or substituted  $C_2-C_4$ alkynyl, unsubstituted or substituted  $C_3-C_6$ cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or  $-SR_6$ ; and

$R_6$  is unsubstituted or substituted  $C_1-C_{12}$ alkyl, unsubstituted or substituted  $C_2-C_4$ alkenyl, unsubstituted or substituted  $C_2-C_4$ alkynyl, unsubstituted or substituted  $C_3-C_6$ cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocycyl;

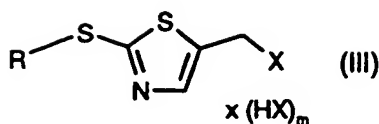
X is halogen; and

$X_1$  is a leaving group;

or, where applicable, an E/Z-isomer, a mixture of E/Z-isomers and/or a tautomer thereof.

7. A process for the preparation of a compound of the formula

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or, where applicable, an *E/Z*-isomer, a mixture of *E/Z*-isomers and/or a tautomer thereof, wherein

**R** is unsubstituted or substituted  $\text{C}_1\text{-C}_{12}$ alkyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkenyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkynyl, unsubstituted or substituted  $\text{C}_3\text{-C}_6$ cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or  $-\text{SR}_6$ ; and

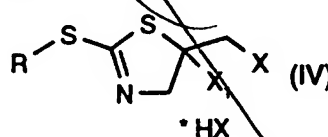
**R<sub>6</sub>** is unsubstituted or substituted  $\text{C}_1\text{-C}_{12}$ alkyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkenyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkynyl, unsubstituted or substituted  $\text{C}_3\text{-C}_6$ cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocyclyl,

**m** is 0 or 1; and

**X** is halogen;

which comprises reacting a compound of the formula (II), as defined in claim 1, with a halogenating agent, in the presence of a base.

8. A process for the preparation of a compound of the formula



or, where applicable, an *E/Z*-isomer, a mixture of *E/Z*-isomers and/or a tautomer thereof, wherein

**R** is unsubstituted or substituted  $\text{C}_1\text{-C}_{12}$ alkyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkenyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkynyl, unsubstituted or substituted  $\text{C}_3\text{-C}_6$ cycloalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heterocyclyl, or  $-\text{SR}_6$ ; and

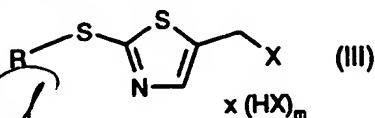
**R<sub>6</sub>** is unsubstituted or substituted  $\text{C}_1\text{-C}_{12}$ alkyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkenyl, unsubstituted or substituted  $\text{C}_2\text{-C}_4$ alkynyl, unsubstituted or substituted  $\text{C}_3\text{-C}_6$ cycloalkyl, unsubstituted or substituted aryl or unsubstituted or substituted heterocyclyl,

**X** is halogen;

which comprises reacting a compound of the formula (II), as defined in claim 1, with a halogenating agent.

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9. A process for the preparation of a compound of the formula



or, where applicable, an *E/Z*-isomer, a mixture of *E/Z*-isomers and/or a tautomer thereof, wherein R, X and m are as defined in claim 7 for formula (III), which comprises treating a compound of the formula (IV), as defined in claim 6 with a base.

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